EXHIBIT 4

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IN THE UNITED STATES
PATENT AND TRADEMARK OFFICE

Patent Application

Inventor(s): Govinda N. Rajan et al.
Case: G. N. Rajan 5-1 (LCNT/125578)
Serial No.: 10/870,217   **Group Art Unit**: 2619
Filed: 06/17/2004   **Confirmation #**: 8666
Examiner: Jagannathan, Melanie
Title: METHOD AND APPARATUS FOR DETERMINATION OF
NETWORK TOPOLOGY

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SIR:

RESPONSE AMENDMENT AFTER FINAL REJECTION

In response to the final Office Action mailed July 9, 2008, please reconsider the above-identified patent application as follows.

In the event that an extension of time is required for this response to be considered timely, and a petition therefor does not otherwise accompany this response, any necessary extension of time is hereby petitioned for.

Applicants do not believe that any fee is due in connection with this response. In the event Applicants are incorrect, the Commissioner is authorized to charge any fees due, including extension of time and excess claim fees, to counsel's Deposit Account No. 20-0782/LCNT/**125578**.

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IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1   1.   (original) A method for managing a communications network having a
2   plurality of areas, each of said plurality of areas having associated with it a respective
3   group of nodes, said method comprising:
4   adapting a single sniffer to collect information from nodes associated with
5   at least two selected areas of said network; and
6   determining a topology of at least a portion of said network using said
7   collected information.

1   2.   (original) The method of claim 1 wherein the step of adapting said single
2   sniffer further comprises connecting said sniffer to a central location of said network.

1   3.   (original) The method of claim 2, wherein said sniffer is part of an existing
2   network management system of said network.

1   4.   (original) The method of claim 2 wherein said sniffer is a stand-alone
2   device connected independently to said central location of said network.

1   5.   (original) The method of claim 2 wherein the step of adapting the single
2   sniffer further comprises configuring said centrally connected network sniffer as a
3   partitioned designated node of a selected area.

1   6.   (original) The method of claim 5, wherein said selected area further
2   comprises an L1 area and an L2 area; and in the case of an L1 area being selected, said

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3 method further comprises configuring said sniffer as a partition designated L2 node of the

4 selected L1 area.

1   7.   (original) The method of claim 1, wherein said information from said

2 nodes comprises link state messages.

1   8.   (original) The method of claim 1 wherein said collected information is

2 based upon an existing network protocol.

1   9.   (original) The method of claim 8 wherein said existing network protocol is

2 part of ISO-IEC 10589:2001.

1   10.   (original) The method of claim 1 wherein the step of determining the

2 topology further comprises collecting information about a first selected area and

3 calculating the topology according to said first selected area and then subsequently

4 receiving information about a second or more selected areas and recalculating the

5 topology based upon each new area.

1   11.   (original) The method of claim 1 wherein the step of determining the

2 topology further comprises receiving information from all nodes of all areas in the

3 network and performing a single topology calculation.

1   12.   (original) The method of claim 1, wherein said areas are selected by

2 sequentially configuring said sniffer as a partition designated L2 node of an L1 area to be

3 selected.

1   13.   (original) A computer readable medium containing a program which,

2 when executed, performs an operation for managing a communications network having a

3 plurality of areas said operation comprising:

4   adapting a single sniffer to collect information from nodes associated with at least

5 two selected areas of said network; and

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6   determining a topology of at least a portion of said network using said
7   collected information.

1   14.   (original) The computer readable medium of claim 13 wherein the step of
2   adapting said single sniffer further comprises connecting said sniffer to a central location
3   of said network.

1   15.   (original) The computer readable medium of claim 14, wherein said
2   sniffer is part of an existing network management system of said network.

1   16.   (original) The computer readable medium of claim 14 wherein said sniffer
2   is a stand-alone device connected independently to said central location of said network.

1   17.   (original) The computer readable medium of claim 14 wherein the step of
2   adapting the single sniffer further comprises configuring said centrally connected
3   network sniffer as a partitioned designated node of a selected area.

1   18.   (original) The computer readable medium of claim 17, wherein said
2   selected area further comprises an L1 area and an L2 area; and in the case of an L1 area
3   being selected, said method further comprises configuring said sniffer as a partition
4   designated L2 node of the selected L1 area.

1   19.   (original) The computer readable medium of claim 13, wherein said
2   information from said nodes comprises link state messages.

1   20.   (original) The computer readable medium of claim 13 wherein said
2   collected information is based upon an existing network protocol.

1   21.   (original) The computer readable medium of claim 20 wherein said
2   existing network protocol is part of ISO-IEC 10589:2001.

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1   22.   (original) The computer readable medium of claim 13 wherein the step of
2   determining the topology further comprises collecting information about a first selected
3   area and calculating the topology according to said first selected area and then
4   subsequently receiving information about a second or more selected areas and
5   recalculating the topology based upon each new area.

1   23.   (original) The computer readable medium of claim 13 wherein the step of
2   determining the topology further comprises receiving information from all nodes of all
3   areas in the network and performing a single topology calculation.

1   24.   (original) The computer readable medium of claim 13, wherein said areas
2   are selected by sequentially configuring said sniffer as a partition designated L2 node of
3   an L1 area to be selected.

1   25.   (original) A communications network having improved topology
2   determination means comprising:
3   an inner nodal area;
4   one or more outer nodal areas connected to the inner nodal area; and
5   means for detecting topology forming information about all nodes in the inner and
6   outer nodal areas from a central location in the communications network.

1   26.   (original) The communications network of claim 25 wherein said means
2   for detecting the topology forming information is a single sniffer connected to the inner
3   nodal area.

1   27.   (original) The communications network of claim 26 wherein the sniffer is
2   part of an existing network management system of said network.

1   28.   (original) The communications network of claim 26 wherein the sniffer
2   apparatus is a stand-alone device connected independently to the central location of the
3   network.

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1   29.   (original) The communications network of claim 26 wherein the sniffer is
2   instructed to function as a partition designated node in an existing network protocol.

1   30.   (original) The communications network of claim 29 wherein the existing
2   network protocol is ISO-IEC 10589:2001.

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R e m a r k s

Claims 1-30 are pending in the application.

Claims 1-8, 10-20, and 22-29 are rejected under 35 U.S.C. §102(e) as being anticipated by Kao et al. U.S. Patent No. 7,054,951, hereinafter "Kao."

Claims 9, 21, and 30 are rejected under 35 U.S.C. §103(a) as being unpatentable over Kao in view of Govindarajan et al. U.S. Patent No. 7,263,552, hereinafter "Govindarajan."

Each of the various rejections and objections are overcome by amendments that are made to the specification, drawing, and/or claims, as well as, or in the alternative, by various arguments that are presented.

Entry of this Amendment is proper under 37 CFR §1.116 since the amendment: (a) places the application in condition for allowance for the reasons discussed herein; (b) does not raise any new issue requiring further search and/or consideration since the amendments amplify issues previously discussed throughout prosecution; (c) satisfies a requirement of form asserted in the previous Office Action; (d) does not present any additional claims without canceling a corresponding number of finally rejected claims; or (e) places the application in better form for appeal, should an appeal be necessary. The amendment is necessary and was not earlier presented because it is made in response to arguments raised in the final rejection. Entry of the amendment is thus respectfully requested.

Any amendments to any claim for reasons other than as expressly recited herein as being for the purpose of distinguishing such claim from known prior art are not being made with an intent to change in any way the literal scope of such claims or the range of equivalents for such claims. They are being made simply to present language that is better in conformance with the form requirements of Title 35 of the United States Code or is simply clearer and easier to understand than the originally presented language. Any amendments to any claim expressly made in order to distinguish such claim from known prior art are being made only with an intent to change the literal scope of such claim in the most minimal way, i.e., just to avoid the prior art in a way that leaves the claim novel

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and not obvious in view of the cited prior art, and no equivalent of any subject matter remaining in the claim is intended to be surrendered.

Also, because a dependent claim inherently includes the recitations of the claim or chain of claims from which it depends, it is submitted that the scope and content of any dependent claims that have been herein rewritten in independent form is exactly the same as the scope and content of those claims prior to having been rewritten in independent form. That is, although by convention such rewritten claims are labeled herein as having been "amended," it is submitted that only the format, and not the content, of these claims has been changed. This is true whether a dependent claim has been rewritten to expressly include the limitations of those claims on which it formerly depended or whether an independent claim has been rewriting to include the limitations of claims that previously depended from it. Thus, by such rewriting no equivalent of any subject matter of the original dependent claim is intended to be surrendered. If the Examiner is of a different view, he is respectfully requested to so indicate.

Rejection Under 35 U.S.C. §102

Claims 1-8, 10-20, and 22-29 are rejected under 35 U.S.C. §102(e) as being anticipated by Kao. The rejection is traversed.

Anticipation requires disclosure in a single prior art reference of each and every element of the claimed invention, arranged as in the claim. Kao does not teach or suggest each and every element of the claimed invention, as arranged in independent claim 1.

In response to Applicants' arguments, the Examiner suggests that because Kao disclose that each node of a network collects topology information for all the nodes of the network, using discovery packets, Kao teaches a single sniffer (each node) collecting topology information for all nodes. This reasoning relies upon a network node of Kao being equated to the Applicants' sniffer. Applicants respectfully disagree with such an interpretation of Kao.

Though Kao discloses that a network node may be in a sniffer state, a network node and a sniffer are distinct network elements and cannot be equated. As known to a person skilled in the relevant art, a sniffer is a computer software or hardware that can intercept and log traffic flowing through a network. The sniffer identifies information of

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interest within an information stream or bit stream, captures it and eventually decodes its content, while allowing the stream to continue its flow. The sniffer itself or its presence does not directly affect the stream or the network characteristics. Moreover, one of the main characteristics of a sniffer is to stay undetected by other network elements. If a computer software or hardware network element is easily detected by other network elements, such a network element is not a sniffer even when configured to receive and interpret information.

Kao discloses that a network node may determine ring identifiers. During the active sniffer state, the network node receives and interprets information. However, Kao's network nodes are continuously present network devices which are visible to/detectable by other network devices (e.g., via MAC address), notwithstanding whether these network devices are in the active sniffer state. Unlike a sniffer, which presence in a network is not known to other network devices, when a network node is present in a network, other network devices know about the network node (i.e., the network node is a part of the network topology). Further, unlike a sniffer removing of which does not directly affect network characteristics (e.g., the network topology stays the same), removing of a network node from the network directly affects the network (e.g., creates a new topology for the network).

Accordingly, Kao fails to teach or suggest at least "a sniffer," and thus, fails to disclose each and every element of the claimed invention, as arranged in Applicants' independent claim 1. As such, independent claim 1 is not anticipated by Kao and is allowable under 35 U.S.C. §102. Independent claims 13 and 25 recite relevant limitations similar to those recited in independent claim 1 and, as such, and at least for the same reasons as discussed above, these independent claims also are not anticipated by Kao and are allowable under 35 U.S.C. §102.

Because all of the dependent claims depending from the independent claims include all the limitations of the respective independent claim from which they ultimately depend, each such dependent claim is also allowable over Kao.

Therefore, Applicants' claims 1-8, 10-20, and 22-29 are allowable over Kao under 35 U.S.C. §102. The Examiner is respectfully requested to withdraw the rejection.

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Rejection Under 35 U.S.C. §103(a)

Claims 9, 21, and 30 are rejected under 35 U.S.C. §103(a) as being unpatentable over Kao in view of Govindarajan. The rejection is traversed.

Each of these grounds of rejection applies only to dependent claims, and each is predicated on the validity of the rejection under 35 U.S.C. §102 given Kao. Since the rejection under 35 U.S.C. §102 given Kao has been overcome, as described hereinabove, and there is no argument put forth by the Office Action that Govindarajan supplies that which is missing from Kao to render the independent claims anticipated, these grounds of rejection cannot be maintained.

Therefore, Applicants' claims 9, 21, and 30 are allowable over Kao in view of Govindarajan under 35 U.S.C. §103(a). The Examiner is respectfully requested to withdraw the rejection.

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Conclusion

It is respectfully submitted that the Office Action's rejections have been overcome and that this application is now in condition for allowance. Reconsideration and allowance are, therefore, respectfully solicited.

If, however, the Examiner still believes that there are unresolved issues, the Examiner is invited to call Eamon Wall at (732) 530-9404 so that arrangements may be made to discuss and resolve any such issues.

Respectfully submitted,

Dated: __7/31/08__

_____
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Electronic Acknowledgement Receipt

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Application Number:	10870217
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Confirmation Number:	8666
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First Named Inventor/Applicant Name:	Govinda N. Rajan
Customer Number:	46363
Filer:	Eamon J. Wall/Carol Wilson
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Document Number	Document Description	File Name	File Size(Bytes)/Message Digest	Multi Part /.zip	Pages (if appl.)
1		LCNT125578eFinalAmend8_1_08.pdf	380569 aadedeecffdaff4e2c810d25862b9f96b556bd31	yes	11

Multipart Description/PDF files in .zip description

Document Description	Start	End
Amendment After Final	1	1
Claims	2	6
Applicant Arguments/Remarks Made in an Amendment	7	11

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Total Files Size (in bytes):	380569

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New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371
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New International Application Filed with the USPTO as a Receiving Office
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.